

ABSTRACT

A porous preform (carrier) is soaked in an impregnating solution, which contains both of a catalytic-activity constituent, e.g. Ni and/or Co, and a carrier-forming constituent, e.g. Mg, Al, Zr, Ti and/or Ca, so as to simultaneously infiltrate the catalytic-activity and carrier-forming constituents into the porous preform. The impregnated preform is dried, calcined at a temperature of 700°C or higher and then activated at a temperature of 500°C or higher, whereby fine catalytic-activity particles are distributed on a surface of the porous carrier with high dispersion. Due to finely-distributed catalytic-activity particles, the surface of the catalyst is prevented from deposition of carbonaceous matters during reformation of hydrocarbon and held in an active state over a long term.